

Figs. 13-17. <i>Reptilia</i> .			L. D.	S. D.
Gymnopus ægyptia-				
cus	1,143	2,000		
Crocodilus acutus	1,231	2,286		
T.	8,000			
Lacerta viridis	1,555	2,743		
Anguis fragilis	1,178	2,666		
Coluber berus	1,274	1,800		
Nucleus	3,227	4,986		
Python tigris	1,440	2,400		
Nucleus	3,555	7,468		
Bufo vulgaris	1,043	2,000		
T.	5,625			
Nucleus	2,802	5,261		
Lissotriton punctatus ..	814	1,246		
Nucleus	1,778	2,667		
Fig. 14. Sieboldia maxima	450	800		
Fig. 15. Siren lacertina.	420	760		
Nucleus	1,142	2,007		
Figs. 16. Proteus anguinus				
			L. D.	S. D.
Fig. 17. Lepidosiren an-			400	727
nectens			570	941
Nucleus			1,455	2,900
Figs. 18. <i>Pisces</i> .				
Perca cernua			2,461	3,000
The same on edge, T. 8830				
Nucleus			6,000	8,000
Cyprinus tinca			2,286	2,722
T.			8,830	
Nucleus			8,500	9,600
Esox lucius			2,000	3,555
Nucleus			5,333	8,000
Thymallus vulgaris ...			1,684	2,900
Gymnotus electricus ...			1,745	2,599
Squalus acanthias			1,143	1,684
Ammocetes branchialis				2,460

March 11, 1862.

Dr. Gray, V.P., in the Chair.

Mr. W. H. Flower, F.R.C.S., F.L.S., Conservator of the Museum of the Royal College of Surgeons, read a memoir on the Brain of the Javan Loris (*Stenops javanicus*).

The subject of this communication was an adult female, which died in the Zoological Society's Gardens in January, 1862. In the examination of the brain every care had been taken to preserve the natural configuration of the different portions of the organ; the drawing of the upper surface had been made before its removal from the cranial cavity, and the other drawings, descriptions, and measurements were checked by comparison with a cast of the interior of the skull. The value of the descriptions and figures of the brain of *Stenops* already published had been much diminished by inattention to such precautions; and they had also had the disadvantage of being made before the researches of Gratiolet had thrown light upon the arrangement of the convolutions on the cerebral hemispheres of the higher Quadrumana. A new description, which may serve as a standard of comparison in studying the cerebral anatomy of allied forms, seemed therefore to be called for.

The following is an abstract of Mr. Flower's remarks:—

"When seen *in situ*, the two hemispheres present together an oval figure, 1·3 inch in length, and 1·05 inch across the broadest part, which is situated at the junction of the middle and posterior third of the long axis. From this point the oval gradually narrows to rather a sharp apex in front. There is no appearance of that want of symmetry, both of size and form in the two hemispheres, described and figured by Vrolik. Projecting anteriorly to the extent of $\frac{1}{2}$ inch beyond the cerebral hemispheres are the olfactory lobes, of consider-

able vertical depth, but compressed laterally, and pointed in front. Projecting posteriorly is a very narrow edge of the cerebellum, most visible in the middle line, both on account of its own greater prominence at this part, and because the widening out of the termination of the great longitudinal fissure of the cerebrum allows more of its upper surface to be seen. When seen from one side, the upper contour of the brain forms a low, flattened arch, the greatest point of elevation being a little way behind the centre. The anterior or frontal lobe is much depressed, and excavated below to make room for the orbital plates of the frontal bone. The temporal lobes, distinctly marked off from the last by the Sylvian fissure, are full and make a considerable projection downwards and forwards. The occipital lobes are short and of little vertical depth, being hollowed below for the cerebellum, the greater part of which body they cover. The sulci of the cerebral hemispheres, though few, are well marked and tolerably symmetrical. A particular description of their arrangement is given in the paper. The principal sulci correspond with those which in the higher *Quadrumana* have been named Sylvian, antero-temporal, calloso-marginal, calcarine, and dentate.

"On the inferior surface of the brain, the olfactory lobes in their anterior half are seen to be compressed, and of equal width almost to their termination; posteriorly they become flat, and widen out to their attachment to the under surface of the anterior lobe. The fissure of Sylvius divides them from the temporal lobe. The orbital surface of the hemisphere, as seen on each side of the olfactory lobes, is hollowed out, and presents a simple longitudinal sulcus. The optic nerves are small for the size of the brain; behind them is a prominent, round, whitish mass filling up the greater part of the interpeduncular space, in which the corpora albicantia are not clearly distinguished from the tuber cinereum. The crura cerebri are of moderate size. The pons Varolii is not much elevated; it is distinctly marked off in front, but very indefinitely separated from the medulla behind. The last-named body is broad and flat anteriorly, the median groove distinct, its other divisions but faintly indicated. The nerves appear all to rise in the situations usual in this group of animals.

"The corpus callosum is 0.65 inch long, and covers half of the anterior pair of the corpora quadrigemina. Of these bodies the anterior are the largest, they are flat and rounded in outline; the posterior are small, but very prominent. The posterior part of the fornix is very broad, covering the optic thalami, and forming a wide lamina (*corpus fimbriatum*) descending into the middle corner of the ventricle. The hippocampus major is of moderate size. With all the care taken, it was not possible to ascertain satisfactorily the extent to which the ventricular cavity passed into the posterior lobe; but this is a circumstance of very little importance, and varies greatly even in the same species of *Quadrumana*. On the other hand, it is of considerable anatomical and physiological consequence that the portion of grey matter homologous to that forming the so-termed 'hippocampus minor' of the human subject, only of proportions

corresponding to the greater relative depth of the calcarine sulcus, exists in this brain, as in that of *Lemur* and *Galago* and all the true Apes.

“The brain of *Stenops* conforms closely with that of *Lemur*, both in its general form and the disposition of its surface-markings. The principal differences that were observed between them are described in the paper; and then follows a comparison of the brains of these two animals with those of the higher Quadrumana. As has been so well shown by M. Gratiolet, in his beautifully illustrated memoir upon this subject, a certain type both of general configuration and of surface-markings pervades the brain of all the *Primates*, from Man to the Marmoset. From this type M. Gratiolet excludes the Strepsirrhine Quadrumana, placing them, with the Insectivora, in a group of Mammalia whose cerebral organization he considers to be quite distinct from that of the two first families of Quadrumana. The author of the present paper finds reason to dissent from this proposition, and upon cerebral characters alone would retain the *Lemurs* in the position assigned to them by the majority of systematic zoologists—admitting, however, that, while possessing certain very important points of structure peculiar to the *Primates*, they are in many respects, especially in the shortness of the posterior lobes, an aberrant group, forming a transition towards the Cheiroptera, Carnivora, and other inferior Mammalia.”

This paper will be published at full length in the Society's ‘Transactions,’ and appropriately illustrated.

The following paper was read:—

ON A NEW FORM OF PHYSA, OF THE SECTION AMERIA, RECEIVED FROM GEORGE FRENCH ANGAS, ESQ., OF ANGASTON, SOUTH AUSTRALIA, CORRESPONDING MEMBER OF THE SOCIETY. BY LOVELL REEVE, F.L.S.

The genus *Physa* occurs abundantly in the ponds and ditches of Europe and North America, and throughout the intertropical mainland and islands of the Eastern hemisphere. But in all the numerous species belonging to this wide range of geographical distribution the shell is regularly convex and smooth. In Australia and New Zealand a new type appears, in which the shoulder of the whorl is broadly angled. Eight species, in the collection of Mr. Cuming, characterized by this angular growth, some of them with the spire flatly immersed—two from New Zealand, the rest from North Australia, Port Essington, and the Boyne, Calliope, and Fitzroy Rivers—have been lately described by Mr. Henry Adams under the new generic title of *Ameria*, all being uniformly smooth. They differ from the rest of the *Physæ* in being formed on the angular type; they resemble them in being still destitute of sculpture. The form of *Physa* now introduced from South Australia is of the angular type, but it differs from all others in being sculptured transversely with thread-like ridges. The shells of the allied genus *Limnæa* are